

## STUDIES IN AUSTRALIAN ENTOMOLOGY,

No. xvii. NEW GENERA AND SPECIES OF CARABIDÆ.

(Pamborini, Migadopini, Broscini, Cuneipectini, Nomiini, Pterostichini, Platynini, Oodini, Harpalini, and Lebiini.)

BY THOMAS G. SLOANE.

(With one text-fig.)

*(Continued from Vol. xxxv., p. 406, 1910.)*

Subfamily CARABINÆ.

Tribe Pamborini.

Genus PAMBORUS.

PAMBORUS ELEGANS, n.sp.

♀. Oval, convex. Prothorax with marginal channel and lateral basal impression uniting in a concavity at each posterior angle; elytra with fifteen interstices, eighth interstice not catenulate on disc, edge of reflexed lateral border without any serrations. Black; head with a slight viridescent flush behind occipital transverse impression; prothorax margined with green; elytra bronzy, with lateral margin green.

Prothorax broader than long (6.3 × 7.8 mm.)\*, wider across base (6 mm.) than apex (5 mm.). Elytra convex, striæ wide, strongly and closely punctate; interstices narrow, costate, interrupted on apical declivity, 1-11 not catenulate on disc, twelfth more or less interrupted; lateral channel wide. Length 25, breadth 10 mm.

*Hab.*—Queensland: Herberton District, southward from Atherton (Dodd); Coll. Sloane; two specimens, ♀.

This beautiful species was sent to me by Mr. F. P. Dodd, who found it in the scrub eastward from Herberton in North Queensland. It belongs to the section of the genus characterised by

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\* The length here given for the prothorax is measured in the middle; the length from anterior to posterior angle is 7 mm.

having fifteen interstices on each elytron, the other species being *P. guérini* Gory, and *P. pradierei* Chaud. From *P. guérini*, it is easily distinguished by the larger size, colour, reflexed border of elytra without serrations, etc. It requires comparison only with *P. pradierei*, from which it differs greatly by the more convex form; prothorax wider, with base wider than apex (in *P. pradierei* prothorax with base and apex of equal width, 4·9 mm.), basal angles wider and less strongly produced backwards (the base being less deeply emarginate than in any other species of the genus); elytra far more convex (more convex than in *P. viridis*), eighth interstice not catenulate, marginal channel much wider, etc.

### Tribe Migadopini.

#### Genus STICHONOTUS.

It should be noted, that the genus *Stichonotus* has the head with the upper articulation-point of the mandibles with the head covered by the lateral edge of the clypeus, a feature that is rare in the family Carabidæ; metasternum without apparent epimera; four anterior tarsi in ♂ clothed with spongiose tissue beneath, anterior tarsi short, joints 1-4 spongiose beneath; intermediate tarsi with first joint stout, as long as the two succeeding joints together, a small tuft of spongiose tissue on lower side near apex, second and third joints lightly dilatate, and clothed with spongiose tissue beneath.

#### *Table of Species.*

- 1(4) Elytra with lateral channel simple. [Tasmanian species].
- 2(3) Elytra with striæ lightly impressed, interstices hardly convex; colour piceous, first interstice and a narrow lateral margin dull red. .... *S. piceus* Sl.
- 3(2) Elytra with striæ strongly impressed, interstices roundly convex; colour piceous, with wide lateral and apical margins testaceous (also some testaceous markings on interstices 5-7, first interstice piceous). .... *S. leai* Sl.
- 4(1) Elytra with lateral channel crenulate. (Piceous-black, with testaceous lateral and apical margins). [Victorian species].  
..... *S. limbatus* Sl.

## STICHONOTUS PICEUS, n sp.

♂. Oval, convex. Piceous; lateral margins of prothorax (widely at base) and elytra (narrowly), first interstice, and legs reddish.

Head large (1.6 mm. across eyes), deeply set in prothorax. Prothorax transverse (1.6 × 3.3 mm.), widest at base, strongly narrowed to apex (1.8 mm.), lightly bifoveate near base; sides lightly rounded; apex widely emarginate; anterior angles pointed, strongly advanced; basal angles sharply triangular; border narrow and equal on sides, very narrow and entire along anterior margin, obsolete on base; median line lightly impressed. Elytra wide, short (4.5 × 3.4 mm.), convex, lightly depressed on disc behind scutellum; striæ entire, lightly impressed, especially towards apex, subcrenulate, second (counting at base) obsolete on apical declivity;\* interstices hardly convex on disc, depressed on apical declivity, ninth (counting at apex) narrow, not crenulate, seriate-punctate (punctures wide apart in middle); marginal channel simple. Length 6.2, breadth 3.4 mm.

*Hab.*—Tasmania: Mount Wellington (Lea; unique).

Allied to *S. leai* Sl., but differing by size larger, colour different, striæ of elytra decidedly shallower, interstices not convex. From *S. limbatus* Sl., it differs by colour, elytra far less strongly striate, striæ far less strongly crenulate, lateral channel simple, etc.

## STICHONOTUS LIMBATUS, n.sp.

♂. Oval, robust; elytra strongly striate. Piceous, prothorax and elytra with testaceous margins; elytra with first interstice piceous to apex, interstices 1-7 piceous on at least basal two-thirds, legs piceous-red, antennæ and palpi testaceous.

Head large (1.6 mm. across eyes). Prothorax transverse (1.6 × 2.95 mm.), widest at base, strongly narrowed to apex (1.7 mm.), lightly convex; sides narrowly angustate to anterior angles, subparallel to base; apex widely emarginate-truncate; anterior angles prominent, pointed; basal angles triangular, slightly

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\* I take the present opportunity to direct attention to an error in my description of *S. leai* (These Proceedings, 1910, p.380), where the second stria is said to be "obsolete on basal declivity"; this should read, apical declivity.

blunted at apex; border well developed and equal on sides, continuous along anterior margin. Elytra wide ( $3.7 \times 3$  mm.), convex; striæ decidedly crenulate, second (counting at base) obsolete on apical declivity, ninth (counting at base) curving inwards near base; interstices lightly convex on disc, more strongly convex towards apex, eighth wide, depressed, ninth rugose (the rugosity caused by closely placed, punctiform depressions along inner and outer sides of interstice). Length 6.5, breadth 3 mm.

*Hab.* — Victoria: Beech Forest, Otway Ranges (Dixon). Colls. National Museum, Melbourne, Dixon, and Sloane.

This species was found by Mr. J. E. Dixon, of Melbourne, its discovery adding another genus to the fauna of the mainland of Australia. It is closely allied to the Tasmanian *S. leai* Sl., and has the same elongate second stria on the elytra, which ends at the beginning of the apical declivity. *S. limbatus* differs from *S. leai* by form less convex, elytra more strongly striate, striæ more strongly punctate, lateral interstice catenulate, closely seriate-punctate along outer as well as inner side; testaceous margin narrower, confined on sides to lateral channel, ninth interstice, and outer side of eighth interstice.

#### DECOGMUS, n.gen.

*Head* stout, not narrowed behind eyes; one supraorbital seta opposite posterior fourth of eye on each side; eyes convex, not enclosed behind, a little distant from buccal fissure; gular sutures wide apart. *Labrum* truncate, 6-setose. *Clypeus* truncate; one seta on each side opposite base of mandibles. *Mandibles* light, elongate, sharply pointed (not strongly hooked); basal articulation-point with clypeus hardly concealed (not overlapped) by sides of clypeus. *Maxillæ* with outer lobe 2-jointed; inner lobe dentate (about six, strong, short, narrow teeth equally distant from one another), a few spinous bristles besides the teeth on basal half, apex sharp, lightly hooked. *Maxillary palpi* rather long; second joint stout; two apical joints narrow, equal, apical joint a little stouter than penultimate joint, truncate. *Labial palpi* rather long; two apical joints of equal length; penultimate slender, bisetose on inner side; apical joint shaped like a narrow

truncate club. *Mentum* wide; lobes wide, obtuse at apex; sinus not deep.\* *Prothorax* closely applied to elytra, subcordate, widely margined; lateral margin without setæ. *Elytra* ovate, bordered at base, strongly striate; second and third striæ uniting at base, second stria† deep, extending to beginning of apical declivity; third interstice impunctate, ninth seriate-punctate; margin not interrupted near apex. *Scutellum* short, almost covered by prothorax. *Prosternum* with anterior coxal cavities closed; intercoxal declivity narrow, abrupt. *Mesosternum* with intercoxal part wide, not channelled; mesepimera reaching coxæ. *Metasternal episterna* a little longer than broad, without apparent epimera. *Legs* light, long; posterior coxæ contiguous; tibiæ slender, anterior a little thickened at apex, inner side emarginate near apex, inner spur remote from apex; tarsi (♀) slender.

This strange genus is quite unlike any other of the tribe Migadopini. I have ventured to tabulate the genera of Australia and New Zealand below, but this has been done without having a representative of the genus *Nebriosoma* before me (only the type-specimen of *N. fallax* Cast., in the Howitt Coll., has been reported as yet).

Prothorax with narrow lateral border.

Elytra seriate-punctate. (New Zealand). . . . . AMAROTYPUS.

Elytra strongly striate. (Australia and Tasmania)... STICHONOTUS.

Prothorax with wide lateral border.

Mandibles short. (Australia). . . . . NEBRIOSOMA.

Mandibles elongate, porrect. (Australia). . . . . DECOGMUS.

\* The mentum, examined *in situ*, does not show the outline of the bottom of the sinus clearly in my two specimens, owing to a gummy exudation, but it appeared to be somewhat sinuous, and evidently without a median tooth.

† This is a false stria, as in *Stichonotus*, representing the striole often found at the base of the second interstice in Carabidæ. In *D. chalybeus*, it is as strongly developed as the other striæ, and extends backwards an unusual distance (a character found only in the tribe Migadopini), with the result, that the elytra have ten interstices, if counted anywhere before the apical declivity, but only the normal number, nine, if counted near the apex.

The other genera known to me, as belonging to the tribe Migadopini, are *Monolobus* (Chile), *Migadops* (= *Brachycælus*: Tierra del Fuego and Falkland Islands), *Lissopterus* (Falkland Islands), *Loxomerus* (= *Heterodactylus*: Auckland Islands), *Rhytidognathus* (Monte Video). Of these, only *Rhytidognathus* is known to me in nature; *R. ovalis* Dej., has the mandibles with a seta in the outer scrobe; and the elytra show the remarkable, elongate, false, second stria, as in the Australian genera. Waterhouse's figures of *Migadops virescens* and *M. ovalis* do not show whether this false stria is present in *Migadops* or not.

DECOGMUS CHALYBEUS, n.sp.

♀. Facies of *Nebria* (e.g., *N. kratteri* Dej., and *N. hemprichi* Klug). Upper surface chalybeous, sometimes purple towards sides of elytra; undersurface black; mandibles, palpi, and tarsi piceous-red.

Head wide between eyes (2.5 mm. across eyes), smooth; front with a wide, shallow impression on each side. Prothorax broader than long (2.7 × 3.5 mm.), widest a little before middle, subdepressed, widely margined, wider at base (2.8 mm.) than apex (2.3 mm.); apex emarginate; anterior angles obtuse, subprominent; base lightly arcuate in middle, truncate on each side; basal angles rectangular, with summit rather obtuse; lateral basal impressions deep, wide, connected by a transverse impression; median line well marked; lateral border wide, reflexed, explanate towards base. Elytra much wider than prothorax (9.7 × 5.1 mm.), hardly wider across base than base of prothorax, roundly explanate on each side behind basal angles (these not marked), subdepressed, deeply striate; striæ simple, second (counting at base) obsolete on apical declivity; interstices convex, ninth (counting at apex) convex, feebly seriate-punctate. Mesepisterna punctate. Apical ventral segment unisetose on each side of apex. Length, 13-14; breadth, 4.8-5.1 mm. Type in Coll. Sloane.

*Hab.*—N. S. Wales: Comboyne. I found two specimens under the bark of a decaying tree fallen in the thick brush, by the side of the road on the Bulli Mountain (north-western slope), near the village of Comboyne, in July, 1914.

Tribe **Brosceini.**Genus **PROMECODERUS.****PROMECODERUS VIRIDIÆNEUS, n.sp.**

Elliptical-oval, lightly convex. Mentum with a strong obtuse tooth. Prothorax lightly rounded on sides; basal angles obtuse ( $3.6 \times 3.8$  mm.). Elytra oval ( $8 \times 5$  mm.), lightly striate; a continuous row of punctures along sides. Upper surface green, shining; undersurface black, with a chalybeous tinge on prosternum, metasternum, and apical ventral segment; legs black, femora with a chalybeous tinge; antennæ black.

♂. Anterior tarsi with the first four joints widely dilatate, and spongiose beneath; intermediate tibiæ with first two joints widely dilatate, and spongiose beneath; apical joint of posterior tarsi long, narrow. Length, 14; breadth, 5 mm.

*Hab.*—Tasmania: Mount Magnet (Lea). Type in Coll. Sloane.

A very distinct species, differentiated from all described species of the genus by colour, and by the continuous row of about eight, foveiform punctures along sides of elytra.

Genus **EURLYCHNUS.****EURLYCHNUS OVIPENNIS, n.sp.**

Robust, oval, convex, nitid. Mandibles with a seta in scrobe; prothorax orbiculate; elytra short, oval, convex, faintly striate on disc, striæ obsolete on sides. Black; legs piceous, tibiæ reddish-piceous, tarsi and antennæ reddish.

Head not large ( $2.2$  mm. across eyes); vertex with an impunctate transverse impression between bases of eyes; front and clypeus strongly biimpressed. Prothorax transverse ( $2.7 \times 3.25$  mm.), widest a little before middle, much wider at apex ( $2.35$  mm.) than base ( $1.8$  mm.), convex, transversely striolate; apex truncate; anterior angles rounded; sides rounded; lateral border narrow, even, reflexed, with a small subprominent juxtabasal protuberance; median line strongly impressed; four setigerous marginal punctures on each side, posterior seta distant from basal angle, anterior seta near anterior angle. Elytra shortly oval ( $5.5 \times 3.8$  mm.), convex, not depressed on disc; four or five inner striæ faintly marked, outer striæ obsolete; no scutellar

striae; lateral border narrow, very shortly turned inwards on each side of base at humeral angles; seven or eight setigerous punctures along each lateral margin. Prosternum bordered along anterior margin. Length, 10; breadth, 3·8 mm.

*Hab.*—N.S.W : Dorrigo (Tillyard). Coll. Sloane; unique.

One specimen was found by Mr. R. J. Tillyard at Dorrigo. It is characterised by its smooth, faintly striate elytra. It is allied to *E. clivinooides* Cast., from which it differs by form shorter; transverse impression of head weaker and impunctate; prothorax similar in shape, juxtabasal protuberance of border less prominent, four (not three) marginal setæ on each side; elytra shorter, striae obsolescent, lateral channel narrower; femora piceous (not red).

#### EURYLYCHNUS KERSHAWI, n.sp.

Convex. Head transversely impressed, strongly biimpressed between antennæ, one supraorbital seta on each side; mandibles with a seta in scrobe of outer side; prothorax cordate, strongly angustate to base without sinuosity; elytra lævigata; anterior femora swollen on lower side in ♂. Black, shining.

Head large (3 mm. across eyes), transversely impressed across vertex on a level with bases of orbits; front and clypeus strongly biimpressed. Prothorax broader than long (3·35 × 4 mm.), widest before middle, lævigata; apex projecting widely on each side of head, wider (3·2 mm.) than base (2·3 mm.); sides lightly rounded, lightly narrowed to apex, obliquely angustate to base; anterior angles widely rounded; basal angles obtuse; border narrow, equal, turned in at base to close lateral channel; a very slight prominence just before basal angles; median line strongly impressed; one setigerous puncture on each side at widest part. Elytra lightly convex, oval (7·2 × 4·7 mm.), truncate at base, lightly rounded on sides, lævigata; a row of punctures along sides, widely placed in middle. Prosternum not bordered along anterior margin. Length, 12·5-13; breadth, 4·5-4·75.

*Hab.*—Victoria : National Park, Wilson's Promontory (J. A. Kershaw; January and April). Colls. National Museum, Melbourne, and Sloane.



A very distinct species, remarkable for its lævigata elytra.

**EURYLYCHNUS FEMORALIS, n sp.**

Elongate, robust, convex, black, nitid. Head transversely impressed behind eyes, strongly biimpressed on front; one supra-orbital seta on each side; mandibles with a setigerous puncture near anterior extremity of external scrobe; antennæ moniliform; prothorax cordate, strongly sinuate on each side before base; elytra convex, smooth, substriate.

Head as in *Lychnus ater* Putz., (3.1 mm. across eyes), convex. Prothorax broader than long (3.6 × 4 mm.), lightly convex; sides lightly rounded, decidedly sinuate near base; apex truncate, much wider (3.3 mm.) than base (2.5 mm.); anterior angles rounded; basal angles rectangular, sharply marked, with the summit rounded; lateral border narrow, reflexed, slightly prominent at basal angle; one lateral marginal seta on each side just before middle. Elytra oval (7.5 × 5 mm.), convex, smooth; striæ obsolescent; a row of widely-placed punctures along side. Prosternum finely bordered along anterior margin. Anterior femora strongly swollen at middle of lower side. Length, 14.5; breadth, 5 mm.

*Hab.*—Tasmania: Mount Horror. Type in Coll. Sloane.

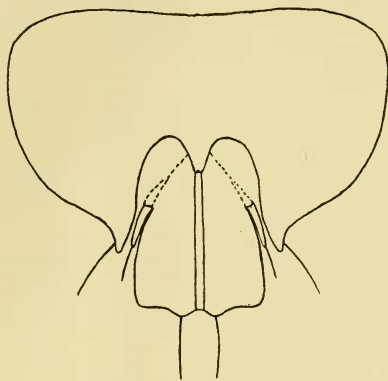
I owe a single specimen of this remarkable species to the generosity of Mr. A. M. Lea. In general appearance, it much resembles *Lychnus ater* Putz., but differs by smaller size; mandibles with a seta in groove of outer side; prothorax sinuate on sides posteriorly, and with sharply marked basal angles. It is allied to *E. kershawi* Sl., from which it is readily distinguished by prothorax sinuate before basal angles, which are sharply marked.

Tribe **Cuneipectini.**

Genus **CUNEIPECTUS.**

The following characters of the genus require stating. Head with one or two supraorbital setæ; body apterous; elytra connate. Labium: ligula corneous, with a mesial keel; paraglossæ corneous, small, triangular, not half the length of ligula, setigerous.

Mr. A. M. Lea has kindly drawn for me the subjoined figure of the labium, which is quite unique amongst the Carabidæ.



Labium of *C. foveatus* Sl.\*

*CUNEIPECTUS FOVEATUS*, n.sp.

♂. Robust, convex. Elytra with foveate sulci and costate interstices. Black.

Head large (6.3 mm. across eyes), convex; front and clypeus minutely punctate; vertex finely reticulate; two supraorbital punctures on each side. Prothorax broader than long (7.5 × 11 mm.), widest a little before middle, a little wider across base (7.5 mm.) than apex (6.5 mm.); disc widely and lightly convex; lateral margins explanate, widely reflexed towards base; apex truncate behind head; anterior angles lightly advanced, wide, roundly obtuse; sides arcuate, roundly obliquely narrowed to base and apex; base widely truncate across peduncle; angles produced decidedly backwards, wide, rounded; posterior marginal seta on border near edge just before basal angle. Elytra oval (21.7 × 14.2 mm.), sulcate; disc convex; apical curve strongly sinuate on each side; sulci wide, deep, foveate; interstices costate, summits narrow (especially towards apex); space between summit of eighth interstice and lateral border forming a wide channel,

\* Mr. Lea's figure shows only one seta at the apex of the paraglossæ; but my observations show that, in a specimen in good order, there are six or seven setæ, three at the apex, the others along the side.

with the bottom roughly rugose-foveate. Tarsi with the first joint of the four posterior spinulose on outer side above the usual lateral row of spinules. Length, 34·5; breadth, 14·2 mm.

\* *Hab.*—West Australia: Onslow District. Type in National Museum, Melbourne.

♀. A second specimen, taken by Mr. Horace Brown, between Mullewa and Yalgo, is in my collection; it has the prothorax more rounded on the sides, anterior and posterior angles less produced. Length, 32 mm.

This species is very distinct from *C. frenchi* Sl., the conspicuous differences being the shape of the prothorax, and the convex elytra with costate interstices and wide foveate sulci. Comparing it with a specimen (♂) of *C. frenchi*, given to me by Mr. F. P. Spry, the following differences are to be noted—head with two supraorbital setæ; prothorax with greatest width further back, sides narrowed to both base and apex in an oblique curve (in *C. frenchi*, the prothorax is widest at anterior third, sides roundly narrowed to apex, and obliquely narrowed to base, so that it is widely truncate-cordate); elytra far more convex, not depressed on disc, the interstices costate, sulci foveate (in *C. frenchi*, the interstices are wide and lightly convex; and the foveæ of the striæ are smaller and punctiform), lateral channel wide and deep, lateral and apical declivities much more declivous.

#### Tribe Nomiini.

#### Genus MEONIS.

#### MEONIS AMPLICOLLIS, n.sp.

*M. niger* Sloane (non Castelnau), Proc. Linn. Soc. N. S. Wales, 1910, xxxiv., p.827.

♀. Elongate-oval. Prothorax broader than long, roundly ampliate on sides, very strongly sinuate posteriorly, basal angles rectangular; elytra strongly 4-striate (fifth stria obsolete). Black, nitid.

♀. Head ordinary (2·5 mm. across eyes), strongly transversely impressed behind; eyes very prominent. Prothorax cordate (3·5 × 3·7 mm.); base and apex of equal width (2·5 mm.); sides

strongly rounded, strongly sinuate posteriorly, and meeting base at right angles; median line strongly impressed; lateral basal impressions deep, narrow, elongate. Elytra oval ( $7.5 \times 5$  mm.); sides strongly rounded; base emarginate; humeral angles obtusely raised; apex strongly sinuate on each side; first stria strongly impressed, not reaching base; striae 2-4 deep, not reaching apex; interstices 2-4 convex; a row of punctures along lateral margins. Length, 14.5; breadth, 5 mm.

*Hab.*—N.S.W.: Tweed River (Carter and Lea). Type in Coll. Sloane.

Two specimens ( $\text{♂♀}$ ) have been examined: the description has been founded on the one in best condition. Formerly, I took this species to be *M. ater* Cast.; but, having compared it with specimens of that species in the Howitt Collection, in the National Museum, Melbourne, which are ticketed "Brisbane," I find my identification was wrong. *M. ater* Cast., is a species closely allied to *M. angulicollis* Sl. I have not made any comparative note on the differences between these species. *M. amplipollis* differs from *M. niger* Cast., by prothorax wider, sides more ampliate and more strongly rounded, more strongly sinuate to base; elytra with only four striae on disc, fourth stria not reaching apex, fifth obsolete; it differs also from *M. convexus* Sl., by almost the same characters.

#### Genus MECYCLOTHORAX.

##### MECYCLOTHORAX LEVICOLLIS, n.sp.

Elliptical-oval. Head convex, lævigata, front feebly biimpressed; prothorax transverse, wider at base than apex, not punctate near base; elytra fully striate, striae 1-7 on disc formed by rows of punctures. Black, nitid; legs reddish; antennæ with the two basal joints testaceous, the other joints sometimes slightly infusate.

Eyes convex, not prominent. Prothorax transverse ( $1.1 \times 1.6$  mm.), depressed on disc and across base, lævigata (without punctures near basal margin), bordered (except on middle of base); sides lightly rounded; anterior angles obtuse; base truncate on each side, lightly sinuate on each side of peduncle; basal

angles rounded; lateral border narrow, not reflexed at basal angles; basal impressions obsolete; median line feebly marked; two marginal setæ on each side; anterior seta before middle at widest part, posterior on a depressed lateral space considerably before basal angle. Elytra ovate, convex, with disc rather depressed; sides subparallel in middle; humeral angles rounded; striæ formed by rows of small punctures on disc (these punctures becoming obsolete towards apex); interstices depressed; striole at base of first interstice short, punctate; third interstice with two punctures on disc along course of third stria; eighth interstice not carinate near apex. Length, 4.3; breadth, 1.7 mm.

*Hab.*—N.S.W.: Kosciusko (Carter). Type in Coll. Sloane.

Allied to *M. laticollis* Sl., but differing by size larger; eyes less prominent; prothorax less convex, not so evenly rounded on sides, not punctate along basal margin, basal angles not so widely rounded; elytra less strongly striate, the punctures in the striæ smaller and not so deep.

#### MECYCLOTHORAX AUSTRALIS, n.sp.

Elliptical-oval. Head convex, lævigata, front biimpressed; prothorax transverse, wider at base than apex, not punctate near base; elytra fully striate, striæ 1-7 formed on disc by rows of punctures. Black, nitid; legs piceous-red; antennæ reddish.

Front and clypeus with a narrow, well-marked impression on each side; eyes small, convex. Prothorax transverse (1.15 × 1.65 mm.), lightly convex, lævigata, without punctures near basal margin, bordered all round; sides lightly rounded; anterior angles obtuse; base truncate, lightly sinuate on each side of peduncle; basal angles widely rounded; median line obsolete on disc, marked by a deep elongate fovea near base; two marginal setigerous punctures on each side, anterior at widest part, posterior on a depressed space a little before basal angle. Elytra ovate, convex; humeral angles rounded; striæ well-marked, formed by rows of rather strong punctures on disc, strongly impressed and impunctate on apical declivity; interstices convex on apical declivity, eighth interstice not carinate towards apex. Length, 5; breadth, 2.1 mm.

*Hab.*—W.A.: Manjimup District (Sloane). Type in Coll. Sloane.

One specimen was found under a log in the thick Karri Forest, 14 miles south-westward from Manjimup, in January. Closely allied to *M. lævicollis* Sl., but differing by form more robust and convex; front more strongly biimpressed; eyes more convex; prothorax more convex, especially near base; lateral basal impressions feebly marked; elytra more convex, more strongly declivous to sides and apex, inner striæ more decidedly marked, more strongly punctate, deeper on apical declivity, interstices convex on apical declivity. I have not been able to discern any dorsal punctures on the third interstice of the elytra in my single specimen.

MECYCLOTHORAX OVALIS, n.sp.

Oval, convex. Prothorax transverse, wider at base than apex, not punctate near base; elytra fully striate, striæ formed by rows of punctures, these punctures reaching apex, eighth interstice not carinate towards apex. Reddish-brown.

Head wide, convex; front lightly biimpressed; eyes round, convex. Prothorax transverse, convex, lævigate, wide and smooth across base; sides rounded; basal angles widely rounded; base lightly sinuate on each side of peduncle; median line obsolete on disc, marked near base; two marginal setigerous punctures on each side, anterior a little before middle, posterior in marginal channel a little before basal angle. Elytra oval, convex; humeral angles rounded; striæ well-marked, punctate; interstices depressed, narrow and convex near apex, eighth not carinate near apex. Length, 3·2; breadth, 1·6 mm.

*Hab.*—W.A.: Manjimup (Sloane). Type in Coll. Sloane.

I found one specimen of this distinct species beneath a log, near the township of Manjimup, in the heavy, south-western forest of Western Australia. It differs much from all others by its colour; robust, convex form; wide prothorax (not much narrower than elytra), without any basal puncturation, sides strongly rounded; elytra oval, convex, strongly punctate-striate, striæ well marked near apex, the puncturation continuous to apex, though becoming finer on apical declivity.

## Genus BRACHYDEMA, n.gen.

Oval, compact. Head with two supraorbital setæ on each side. Mandibles with a seta in scrobe of outer side. Clypeus unisetose on each side. Mentum with sinus oblique on sides; a short, triangular, median prominence; lobes pointed. Labial palpi short; penultimate joint stout; apical joint thick at base, compressed (a concavity on outer side), pointed at apex. Maxillary palpi with two apical joints short; penultimate joint stout, wide at apex, setigerous; apical joint triangular, pointed, a concavity on lower side. Prothorax one-half wider at base than at apex; two marginal setæ on each side, posterior seta just within basal angle. Elytra oval, bordered on base; sutural striae wanting; third interstice bipunctate on disc; eighth shortly carinate towards apex; ninth obsolete and impunctate in middle of its course. Tarsi setose on upper surface.

Though closely allied to *Oopterus*, a new genus is required for the two small beetles described below, one from Victoria, the other from Tasmania. Their compact, oval, Oodes-like form is very different from that of *Oopterus*.

## BRACHYDEMA TASMANIÆ, n.sp.

Oval, compact, piceous, nitid.

Head wide, short, convex; frontal impressions feeble, short. Prothorax transverse, wide across base (1.5 mm.), roundly narrowed to apex (1 mm.), smooth; a feeble impression on base at each side of peduncle; base truncate; basal angles marked, obtuse; lateral border narrow, extending along base on each side to basal impressions; median line obsolescent. Elytra truncate-oval, convex, substriate, wide across base; basal border slightly raised above lateral border at humeral angles; first stria entire, out-turned at base, rising from an umbilicate puncture; second and third marked; 4-7 obsolete; eighth well marked and punctate towards apex. Length, 4.4-5; breadth, 2.1 mm.

*Hab.*—Tasmania: Mount Wellington (Lea). Sent by Mr. A. M. Lea, ticketed "Mount Wellington, in moss."

## BRACHYDEMA VICTORIÆ, n.sp.

Oval, compact; piceous, margins of prothorax and elytra dull red.

Head wide, short, convex; frontal impressions hardly marked. Prothorax transverse, wide across base, strongly roundly narrowed to apex, smooth; a well marked, wide, basal impression on each side; base truncate; basal angles marked, obtuse; lateral border narrow; median line obsolescent. Elytra truncate-oval; convex, substriate; base wide; basal border slightly raised above basal border at humeral angles. Length, 4.4-3; breadth, 2.2-1 mm.

*Hab.*—Victoria: Warburton (Sloane).

This species occurred to me not uncommonly under wood in the damp, densely wooded gullies of the Yeathan Creek, near Warburton, in January. It is very closely allied to *B. tasmanica* Sl., which it resembles in sculpture of elytra, but I have thought it distinct; it differs by the prothorax slightly narrowed to base, strongly impressed on each side of base; elytra more convex, more declivous to sides and apex,

#### Tribe Pterostichini.

##### SARTICUS DIXONI, n.sp.

Elongate-oval, nitid. Elytra oval, strongly striate; striæ finely crenulate; interstices lightly convex on disc, strongly convex on apical declivity, third with four or five punctures near third stria; mes- and metepisterna punctate; ventral segments punctate. Tarsi: first joint of four posterior longitudinally canaliculate externally; penultimate joint of posterior narrow, very little widened to apex; onychium glabrous. Black; antennæ, tarsi, and reflexed border of prothorax reddish-piceous,

Head convex (2.3 mm. across eyes); eyes prominent. Prothorax broader than long (3.15 × 3.65 mm.); sides evenly rounded; apex very lightly emarginate, bordered; lateral border narrow and reflexed anteriorly, very wide and strongly reflexed posteriorly; basal foveæ deep; median line fine. Elytra oval (7.1 × 4.4 mm.); inner humeral angle marked; lateral apical sinuosities moderately developed; striæ shallow and finely crenulate on disc, deep on apical declivity, seventh and eighth each formed by a row of closely placed distinct punctures (these striæ hardly or not impressed along sides), eighth and ninth interstices depressed on sides; lateral channel wide; border strongly reflexed. Prosternum



with anterior margin bordered. Mesosternum punctate in concavities to receive femora; metepisterna bearing a few punctures. Ventral segments all punctate towards sides; punctures of three apical segments in a transverse row along anterior margin. Length, 11.3-13; breadth, 3.75-4.4 mm.

*Hab.*—North-Western District of Victoria (Dixon).

Found by Mr. J. E. Dixon at Sea Lake, and other places in the North-West of Victoria.

Allied to *S. cycloderus* Chaud., but at once distinguishable from that species, and from the other allied species, *S. iriditinctus* Chaud., *S. ischnus* Chaud., and *S. obscurus* Blkb., by its larger size, etc. Compared with *S. dampieri* Sl., with which it agrees in size, it differs by form less robust; elytra quite black, not with a virescent tinge; eyes more convex; elytra narrower, striae finer and less strongly punctate, interstices less convex on disc, lateral apical sinuosities less strongly reflexed. From *S. habitans* Sl., it differs by smaller size; less robust form; prothorax longer; elytra with inner humeral angle more marked, eighth stria far less strongly impressed along sides, third with four or five punctures; posterior tarsi with fourth joint narrower and less triangular, fifth joint glabrous beneath. From *S. monarensis* Sl., and *S. cooki* Sl., it differs by colour black (elytra not sericeous in ♀); more elongate and less robust form; longer, narrower, and less triangular fourth joint of posterior tarsi, etc.

#### NOTONOMUS JOHNSTONI Sloane.

A single specimen (♀) of *N. johnstoni* occurred to me near Craven railway-station (12 miles south from the town of Gloucester), and Dr. Ferguson took it at Camden Haven. Evidently its habitat is the country drained by the Manning River. Only the female of the typical form is known to me. It is worthy of notice that, in this species, the apical ventral segment has a well developed, triangular process fitting into the lateral, apical sinuosity of the elytra. In other species of *Notonomus*, a similar slight, lateral process of the apical, ventral segment may be seen, but not nearly so marked as in *N. johnstoni*; this can be observed

by comparing *N. excisipennis* Sl., the most nearly allied species, with *N. johnstoni*.

Var. PARVULA, n var. This is evidently an upland form of *N. johnstoni*, which merits a varietal name. It differs from the typical form by smaller size; prothorax proportionately a little wider ( $3.3 \times 4$  mm.); sides lightly but evenly rounded to base, not subsinuate just before basal angles, posterior marginal seta a little nearer base, lateral border less reduced between this seta and basal angle; elytra more flushed with purple. Length, 13-15; breadth, 3.8-4.3 mm.

*Hab.* — N.S.W.: Comboyne (Sloane).

Six specimens occurred to me near the village of Comboyne, at an altitude of 1500 feet, in July.

#### NOTONOMUS DIVES, n.sp.

Robust, oval, convex. Prothorax transverse-cordate, posterior marginal seta on border at basal angle; elytra deeply striate, interstices convex, third 5-punctate, eighth convex, wider than ninth towards base, tenth short, feebly developed, humeral angles dentate; intercoxal declivity of prosternum flat, of mesosternum flat. Head, prothorax, and elytra æneous; pronotum with bright golden reflections near basal impressions; elytra sometimes slightly golden; undersurface black.

♂. Head large (5 mm. across eyes). Prothorax broader than long ( $5.8 \times 7.7$  mm.), wider across base (5.8 mm.) than apex (5.3 mm.); sides rounded, hardly subsinuate just before basal angles; base lightly emarginate in middle, lightly arcuate on each side; basal angles subrectangular, rather prominent; border wide, reflexed, reaching basal impressions; median line well marked; lateral basal impressions strongly impressed. Elytra truncate-oval ( $14 \times 9$  mm.); basal border strongly raised and prominent at humeral angles; lateral border strongly reflexed; lateral basal sinuosities strongly developed; striæ deep; crenulate at bottom.

♀. Differing from ♂ by slightly less massive proportions; prothorax not so wide ( $5.6 \times 6.9$  mm.), more narrowed to base (apex and base of equal width, 5.1 mm.); elytra a little narrower, more rounded on sides, more narrowed to base ( $14 \times 8.6$  mm.).

Length, 24; breadth, 8.6-9 mm.

*Hab.*—N.S.W.: Comboyne (Sloane). Four specimens, found on the lower slopes of Mount Bulli, near the Thorne River.

Differs from *N. australis* Cast., and its var. *N. lapeyrousei* Cast., by its broader and heavier form; colour (upper surface wholly aeneous); prothorax more transverse, more rounded on sides, less narrowed and less sinuate to base, border wider.

#### LITARTHURUM, n.gen.

Oval, subdepressed, apterous. *Head* small, smooth; front not impressed; two supraorbital punctures on each side. *Eyes* small, distant from buccal fissure. *Antennæ* slender, lightly compressed; three basal joints cylindrical, glabrous, first stout, as long as second and third together, second small, third a little longer than second, shorter than fourth. *Labrum* truncate. *Maxillæ* narrow, curved and strongly hooked at apex. *Palpi* slender. *Mentum* with a short, obtusely rounded, median tooth. *Prothorax* transverse, depressed, much wider at base than apex, lightly rounded on sides; basal impressions obsolete; border narrow, not reflexed, obsolete only in middle of base and apex; basal angles not marked; two marginal punctures on each side, posterior on border at basal angle. *Elytra* wide, rather convex, lightly striate, bordered at base; humeral angles not dentate; striæ finely crenulate; interstices depressed (except seventh and eighth towards apex); scutellar striole obsolete; interruption of border on each side of apex obsolescent, inner plica not apparent. *Sterna* smooth; metasternum small, very short between intermediate and posterior coxal cavities; metepisterna short, wide. *Ventral segments* not transversely sulcate; ♂ with a large, submarginal, setigerous puncture on each side of apex. *Tarsi*(♂): anterior with three basal joints widely dilatate, basal joint oblique at apex, second and third cordate, fourth very small; four posterior tarsi slender, first joint very long; in intermediate tarsi, as long as the three succeeding joints together; in posterior tarsi, longer than the next three joints together (about as long as the remainder of tarsus).

The insect, on which the genus *Litarthrum* is founded, resembles a wide *Simodontus*, but the nonsulcate ventral segments,

and impunctate third interstice of elytra at once and decidedly distinguish it. The prothorax resembles that of *Cosmodiscus* and *Ephnidius* in shape. It belongs to the central group of the tribe Pterostichini, but I am not sure of its exact position: provisionally, I would place it beside *Pedimorphus*. I know of no other genus in the tribe, in which the first joint of the four posterior tarsi is as long in proportion to the next three joints.

LITARTHURUM BROWNI, n.sp.

♂. Reddish-piceous; prothorax, inflexed margins of elytra, and legs redder than elytra; antennæ reddish-testaceous.

Head small (1.75 mm. across eyes), convex. Prothorax transverse (2.1 × 3 mm.), wider across base (2.6 mm.) than apex (1.9 mm.); depressed, lævigata, rounded on sides; apex widely and lightly emarginate; anterior angles wide, distant from head; base wide, lightly emarginate above peduncle; basal angles widely rounded; border narrow, extending round angles along each side of apex and base, bearing posterior marginal puncture at basal angles; median line linear, feebly impressed on disc. Elytra ovate (4.7 × 3.2 mm.), lightly convex, lightly rounded on sides, lightly striate; apical curve even; base wide; basal border joining lateral border at humeral angle in an open curve; striæ 1-6 lightly impressed, finely crenulate, seventh and eighth strongly impressed towards apex; interstices depressed, except eighth on apical third. Ventral segments finely punctate towards sides. Length, 8; breadth, 3.2 mm.

*Hab.*—W.A.: Cue (H. W. Brown). Unique in Coll. Sloane.

PROSOPOGMUS YARRENSIS, n.sp.

Elliptical, depressed. Prothorax subquadrate; basal angle rectangular, one basal impression on each side; elytra striate, interstices unequal, depressed, shagreened, third with three foveiform punctures, often interrupting the stria. Æneous; coxæ, trochanters, and base of femora brown; apical half of femora testaceous; tibiæ, tarsi, and antennæ reddish-brown.

Head large (1.5 mm. across eyes), convex; front strongly bimpressed. Prothorax broader than long (1.6 × 2 mm.), wider at base (1.6 mm.) than apex (1.35 mm.), depressed, more or less

rugulose towards base; sides lightly rounded, straightened before base, finely bordered; base truncate; lateral basal impressions elongate; lateral basal spaces flat; posterior marginal puncture just within basal angle. Elytra narrow, truncate-oval ( $4 \times 2.4$  mm.); apex lightly sinuate on each side; striæ narrow; interstices depressed, fifth, sixth, and seventh a little convex at their apices, second, fourth, and sixth wider than the others, eighth wider than seventh and ninth on basal half, ninth seriate-punctate along eighth stria, and defined by a distinct ninth stria externally; basal border a little raised at humeral angles; lateral border and channel narrow. Length, 7; breadth, 2.4 mm.

*Hab.*—Victoria: Warburton. Several specimens occurred to me near the Yeathan Creek at Warburton, on the Upper Yarra.

A very distinct species, at once distinguishable from all others by its small size; æneous colour; strongly shagreened, unequal, depressed interstices of elytra, and foveiform punctures of third interstice interrupting the interstice.

#### GASTROGMUS, n.gen.

*Head* convex, front obsoletely biimpressed. *Labrum* truncate. *Palpi* slender. *Mentum*: sinus oblique on sides; median tooth wide, short, emarginate. *Prothorax* subquadrate, rounded on sides; basal angles rectangular; a deep, biimpressed, punctate fovea on each side of base; two marginal setigerous punctures on each side, posterior at basal angle. *Elytra* convex, bordered at base, striate; scutellar striole at base of first interstice elongate; third interstice 3-punctate near third stria; lateral border interrupted, and with inner plica apparent before apex. *Metasternum* punctate on each side; episterna longer than broad, punctate. *Ventral segments* 1-3 punctate, 4-6 transversely sulcate. *Femora* wide; intermediate tibiæ bent inwards, thickened at apex; posterior trochanters very long, apex obtuse, and not applied closely to femora. Anterior tarsi in ♂ lightly dilatate and biserially squamulose beneath.

Belongs to the central body of the tribe Pterostichini, but thoroughly distinct from all other Australian genera. The sulcate ventral segments place it beside *Simodontus*; from which, it is

readily distinguishable by prothorax convex, deeply foveate on each side of base; elytra with scutellar striole at base of first interstice; undersurface punctate; posterior trochanters very long. The elytra are not soldered together, therefore it seems a winged form, but the underwings have not been seen.

*GASTROGMUS ISCHIALIS*, n.sp.

Robust, oval, piceous-black. Head convex (2.1 mm. across eyes); front faintly biimpressed; eyes large, convex, not distant from buccal fissure. Prothorax convex, subquadrate (2.5 × 3 mm.), lightly rounded on sides (obliquely to base), wider across base (2.5 mm.) than apex (2.2 mm.); anterior angles not marked; base truncate; basal angles subrectangular; a deep, wide, biimpressed fovea on each side of base; a few punctures on inner side of these foveæ; border lightly reflexed on sides, entire (wide in middle) on apex, obsolete on middle of base; median line linear, lightly impressed. Elytra oval (5.7 × 3.7 mm.), convex, declivous to base on each side of peduncle, striate; inner striæ crenulate, seventh very faint, eighth obsolete except towards apex; interstices depressed, first bearing at base an elongate crenulate striole, third interstice 3-punctate along course of third stria, sixth, seventh, and eighth interstices united in middle, eighth narrow and convex on apical curve, ninth wide towards apex, its punctures widely interrupted in middle; basal border finely dentate at humeral angles; lateral border and channel narrow. Length, 9.5; breadth, 3.7 mm.

*Hab.*—W.A.: Albany (Sloane). Unique in Coll. Sloane.

A single specimen occurred to me on December 27th, 1914, under a log, in a very damp place, beside a swamp, 2½ miles west of the town of Albany.

*DARODILIA CURTA*, n.sp.

Robust, oval. Front bifoveate; prothorax orbiculate, biimpressed on each side of base; elytra truncate-oval, fully striate on apical half, sixth and seventh striæ obsolete towards base, humeral angles prominent; prosternum with episterna longitudinally striolate. Black, nitid.

Head convex; front punctate on each side at ends of clypeal suture; vertex lightly, transversely impressed; eyes convex. Prothorax broader than long ( $2.5 \times 2.75$  mm.), widest at middle, convex; base and apex of equal width ( $1.75$  mm.); sides rotundate; apex emarginate; anterior angles obtuse; base lightly rounded; lateral basal impressions short. Elytra short, ovate ( $4.5 \times 3.2$  mm.); base wider than base of prothorax, truncate on each side of peduncle; sides lightly rounded; apex strongly sinuate on each side; striæ strongly impressed (excepting sixth and seventh towards base), eighth strongly impressed; interstices lightly convex on disc, more strongly so towards apex; ninth narrow, convex, seriate-punctate, the punctures widely interrupted in middle; basal border a little raised above lateral border at humeral angles; inner humeral angle sharply marked. Metepisterna (with epimera) longer than broad. Ventral segments transversely impressed, punctate towards sides. Length,  $7.8$ ; breadth,  $3.2$  mm.

*Hab.*—Queensland: Herberton District (Dodd); Coll. Sloane.

A single specimen was sent to me by Mr. F. P. Dodd. It can be readily distinguished from its described congeners by its short, robust form; subdentate humeral angles, etc. According to the table of species given by me in these Proceedings, 1899, p. 579, its position is beside *D. robusta* Sl.; from which it differs by its smaller size, shorter shape; elytra with five inner striæ fully impressed, inner humeral angle sharply marked; pro-episterna decidedly striolate, metepisterna shorter, etc.

#### Tribe Sphodrini.

##### PLATYNUS CARTERI, n.sp.

Winged, depressed. Prothorax subquadrate, wider across base ( $2$  mm.) than apex ( $1.5$  mm.); elytra truncate-oval, strongly striate, eighth interstice lightly convex at apex. Tarsi in ♂ stout, depressed; anterior tarsi with three basal joints wide, biserially squamose beneath, fourth joint not greatly narrower than third, subcordate, subemarginate at apex; posterior tarsi with basal joint finely and sparsely biserially setose on upper surface, fifth joint setulose beneath. Piceous-black; tarsi, antennæ, and anterior part of head reddish-piceous.

Head elongate, convex (1.9 mm. across eyes); eyes distant from prothorax. Prothorax hardly as wide as head with eyes, broader than long (1.85 × 2.4 mm.), widest a little before middle; disc very finely transversely striolate; apex widely emarginate; base truncate; lateral margins wide, explanate towards basal angles; border reflexed at anterior angles; median line deeply impressed, extending from the deep, arcuate, anterior impression to the wide, basal impression. Elytra much wider than prothorax (6.9 × 4.3 mm.), lightly convex, declivous to base; humeral angles rounded; apex of each elytron shortly oblique; striæ deep, crenulate; interstices convex, third 3-punctate (first puncture near third stria, opposite the end of the scutellar striole of first interstice; second puncture about middle, third puncture about 1.1 mm. from apex), eighth interstice wider than ninth, ninth not narrow, seriate-punctate, the punctures widely separated in middle of course, a more decided, marked puncture outside the others, and touching the lateral channel about 1.2 mm. behind shoulder. Length, 15.5; breadth, 4.3 mm.

*Hab.*—N.S.W.: Dorrigo. Sent to me by Mr. H. J. Carter as from Dorrigo. Coll. Sloane.

Allied to *P. porphyriacus* Sl., but distinct by colour; prothorax and elytra wider; elytra more strongly striate, etc. It is very distinct from any other Australian species.

#### Tribe Oodini.

##### COPTOCARPUS PARVUS, n.sp.

Elliptical, convex. Labrum 6-setose; prothorax with a light basal impression on each side; elytra lightly striate, striæ minutely crenulate, first interstice without a striole at base. Black, nitid; prothorax reddish on sides towards base; under-surface piceous-red; legs reddish; tarsi, antennæ, and palpi lighter-coloured than legs.

Head ordinary; eyes round, convex. Prothorax subconvex, depressed on each side towards basal angles (this depressed area reddish), narrow at apex, wide at base; sides lightly rounded; apex emarginate; basal angles triangularly obtuse. Elytra narrow, convex; sides parallel towards base; apex widely rounded; three inner striæ reaching base; interstices equal, finely shagreened;



humeral angles marked, but not dentate. Mesepisterna punctate; metepisterna broader than long. Two basal, ventral segments punctate; apical segment in ♂ with two widely placed, small, setigerous punctures; in ♀ with four, setigerous punctures near apical margin. Length, 7; breadth, 2.75-3 mm.

*Hab.*—Western Australia: Manjimup. Type in Coll. Sloane.

I found this species in the Karri Forest, 14 miles from Manjimup Railway-Station; it is the smallest species of the genus. Its position is beside *C. gibbosus* Chaud., from which it differs by smaller size, narrower and less convex form, etc.

#### Genus PHORTICOSOMUS.

Before describing any new species, it is necessary to review the described species of the genus *Phorticosomus*. *Ph. rotundipennis* Cast., *Ph. lateralis* Cast., and *Ph. minutus* Cast., do not belong to the genus. *Ph. rotundipennis* seems to be a species of *Simodontus*, which may be identical with the species I named *S. mandibularis*; but this cannot be settled, till specimens from the Paroo River can be examined. *Ph. lateralis* is a species of *Mecyclothorax*. *Ph. minutus*, from the Paroo River, has been examined by Chaudoir, who referred it to *Simodontus*; but the description seems, to me, to have been founded on a species of *Mecyclothorax* closely allied to *M. fortis* Blkb.

*Ph. grandis* Cast., length 9 lines, from Cooper's Creek, has the prothorax with the anterior angles advanced, and the posterior angles sharply rectangular. I have identified this species as one found by Mr. Zietz at Lake Callabonna. Specimens, given to me by Mr. French, as from Onslow, N.W. Australia, seem to be conspecific.

*Ph. edeli* Cast., I identify as a large species given to me by Mr. H. M. Giles, who found it on the Strelley River, N.W. Australia. Prothorax somewhat similar in shape to that of *Ph. grandis* Cast., but basal angles obtuse (though marked), apex (5.6 mm.) wider than base (5 mm.). Length, 19.5 mm. It seems widely spread; specimens in my collection, from Kalgoorlie, W.A., and Barrow Creek in the Northern Territory, on the overland telegraph-line, cannot be regarded as different from the specimen from Strelley River.

*Ph. nuytsi* Cast., = *Ph. calcaratus* Blkb.—Specimens which I identify as *Ph. nuytsi*, have been given to me by Mr. C. French as from the Kimberley District, W.A. It is a large, black species, with prothorax broad ( $3.5 \times 6$ , apex 4.6, base 4.85 mm.), wider across base than apex, anterior angles advanced, posterior subrectangular (obtuse at summit); elytra with humeral angles sharply marked; anterior tibiæ with three or four, distinct, small teeth externally, above the prominent apical one Mr. F. P. Dodd has sent me specimens from North Queensland (Kurranda and Chillagoe) which are conspecific with *Ph. nuytsi* from N. W. Australia; these agree so closely with the description of *Ph. calcaratus* Blkb., that there seems no room for doubt that it is synonymous. Length, 13-16 mm.

*Ph. mucronatus* Blkb.—My specimens are from Barrow Creek, N.T., and Cunnamulla, Q. It is very closely allied to *Ph. edeli* Cast., of which it is, perhaps, the eastern form.

*Ph. robustus* Blkb., is unknown to me in nature. It seems intermediate between *Ph. grandis* and *Ph. mucronatus*; it is described as having the anterior angles of the prothorax “not at all produced forward as in *Ph. mucronatus*.”

*Ph. similis* Blkb., is in my collection, from Kalgoorlie, W.A. In general appearance, it much resembles *Ph. grandis*; but is smaller; prothorax similar in shape, but with the lateral margin narrower, anterior angles far less advanced.

*Ph. brunneus* Blkb.—Mr. A. M. Lea has sent me a specimen ticketed *Ph. brunneus*, in the handwriting of the late Rev. T. Blackburn. I cannot differentiate it from *Ph. felix* Schaum, the type-species of the genus.

*Ph. randalli* Blkb.—I identify, as of this species, specimens taken at Adelaide by Mr. Griffith. It has the facies of *Ph. felix*, but has the posterior angles of the prothorax quite rounded off.

*Ph. horni* Sl., is widely spread. My collection contains specimens ticketed Bourke, N.S.W.; Winton, Q.; Onslow and Broome, W.A. It can be recognised easily by the form of the posterior trochanters, straight on external side, widely truncate at apex. Length, 18-22 mm.

*Ph. zabroides* Sl., differs from all others by its compact, convex form, the striole at base of second interstice of elytra long and deep, etc.

PHORTICOSOMUS CRASSUS, n.sp.

Robust, convex. Eyes not prominent; prothorax transverse, finely punctate on each side of base, basal angles not marked, base biimpressed; elytra truncate-oval, strongly striate, interstices convex, third impunctate; anterior tibiæ wide at apex, and with a strong, internal spur; intermediate tibiæ wide at apex, and with outer angle produced into a prominent, triangular process. Black, legs reddish-piceous.

Head convex (2.7 mm. across eyes); eyes round, lightly convex, not prominent; front shortly impressed on each side at ends of clypeal suture. Prothorax convex, wide ( $3 \times 4.2$  mm.), wider across base (3.7 mm.) than apex (3 mm.); sides very lightly rounded; anterior angles widely obtuse, not prominent; posterior angles widely rounded, not marked; lateral margins a little wider and punctate near basal angles; lateral basal impressions deep, short, narrow, punctate; median line faintly impressed. Elytra short ( $7 \times 4.75$  mm.), convex, rounded at humeral angles; lateral apical sinuosities obsolete; striæ deep; interstices light, convex on disc; lateral interstices less convex than inner ones, these narrower and more convex on apical declivity; punctures of ninth interstice widely interrupted in middle. Intercoxal part of prosternum setose. Metasternum punctate on each side. Ventral segments 3-5 setigero-punctate on each side; third segment punctate between coxæ; fourth and fifth with a row of punctures along anterior margin. Anterior coxæ not punctate; intermediate coxæ closely punctate; posterior trochanters reniform, smooth (two or three punctures near base); posterior femora punctate along lower external margin. Anterior tibiæ with two, small but decided teeth on outer side, above the larger apical tooth. Length, 11.4; breadth, 4.75 mm.

*Hab.*—Queensland: Chillagoe District (Dodd). Coll. Sloane.

From *Ph. felix* Schaum, which it resembles in general appearance, it can be readily distinguished by eyes less convex; pro-

thorax wider at base, sides less narrowed to base, base strongly biimpressed; four anterior tibiæ with a strong, spur-like, apical prominence externally; anterior tibiæ with two well marked teeth on external side, etc.

Var. *BREVIPENNIS*, n.var. A specimen in the National Museum, Melbourne, is smaller and of shorter form, particularly the elytra; prothorax more rounded on sides, margins not so wide at basal angles, lateral basal impressions less strongly impressed; elytra shorter ( $5.3 \times 4$  mm.), interstices more convex, especially towards sides and apex; ventral segments far less punctate. Length, 9.7; breadth, 4 mm.

In other respects, it resembles the type-form; it is, perhaps, a distinct species, but having only one specimen of each form before me, it has seemed better to consider the island-form as a variety of the larger species of the mainland.

*Hab.*—Melville Island (Spencer).

#### PHORTICOSOMUS PICEUS, n.sp.

Robust, oval, convex. Prothorax wide, subcordate, anterior angles not advanced, lateral margin not explanate at basal angles, these subrectangular; elytra striate, third interstice unpunctate above apical declivity, humeral angles obtuse; anterior tibiæ wide at apex, outer angle very prominent. Piceous; legs reddish-piceous; antennæ and palps reddish.

Head ordinary (3.75 mm. across eyes); eyes small, not prominent. Prothorax smooth, transverse ( $4 \times 5.6$  mm.), widest before middle, convex, declivous to base; sides rounded, roundly narrowed to apex ( $4.15$  mm.), obliquely narrowed to base ( $4.1$  mm.); anterior margin truncate; anterior angles obtuse; base truncate; basal angles well marked, obtuse at summit; lateral marginal channel rather narrow, a little wider, but not explanate, near basal angles; border lightly reflexed near basal angles; a light basal impression on each side; median line light. Elytra broader than prothorax ( $9.6 \times 6.4$  mm.), lightly declivous to base; sides subparallel; lateral apical sinuosities obsolete; interstices depressed, narrowed and more or less convex near apex; striole at base of second interstice short; border narrow, not raised at

humeral angles; lateral channel narrow. Anterior tibiae with outer angle produced into a strong, triangular spur, outer edge crenulate above apical spur; posterior trochanters reniform, external side arcuate, several punctures on basal half. Length, 14.5-16; breadth, 5.8-6.1 mm.

*Hab.*—S.A.: Noorootpa. Type in Australian Museum. Six specimens have been examined, one is now in Coll. National Museum, Melbourne, and one is in my collection.

From description, it seems to resemble *Ph. robustus* Blkb., (unknown to me in nature) but is larger, and has not the sides "strongly sinuated before hind angles." From *Ph. horni* Sl., it differs decidedly by the smaller size; more sharply marked, posterior angles of prothorax; elytra with border less raised at humeral angles; posterior trochanters with posterior side not straight, apex not widely truncate. From *Ph. felix* Sch., and *Ph. randalli* Blkb., it differs, *inter alia*, by size larger, basal angles of prothorax more strongly marked. From *Ph. grandis* Cast., *Ph. nuytsi* Cast., and *Ph. mucronatus* Blkb., it differs in various ways, but from all of them by prothorax with anterior angles not prominent, lateral margins not wide and flat at basal angles.

Mr. H. W. Brown brought, from Cue, a species which has the prothorax almost exactly as in *Ph. piceus*, though the posterior angles are a little more obtuse; it is probably conspecific with *Ph. piceus*.

#### PHORTICOSOMUS CASTELNAUI, n.sp.

Robust, convex. Prothorax subcordate, narrower across base (4.5 mm.) than apex (5.5 mm.), anterior angles strongly advanced, basal angles rectangular; elytra truncate at base, humeral angles marked. Black, antennae piceous.

Prothorax transverse (4 × 6.7 mm.), strongly narrowed to base, depressed along posterior margin; apex truncate between anterior angles, these prominent, obtuse; sides lightly rounded, subsinuate just before base; basal angles rectangular, obtuse at summit; base emarginate above peduncle; margins wide, explanate near

basal angles, depressed; basal area shagreened and minutely punctate. Elytra wide (9.8 × 7 mm.), convex; apical curve hardly sinuate on each side; interstices lightly convex, third unipunctate before basal declivity; basal border with posterior margin straight beyond fourth stria, raised but not angulate at humeral angle. Posterior trochanters reniform, external side arcuate, apex obtusely rounded. Length, 15-17; breadth, 6-7 mm.

*Hab.*—Q.: Gulf of Carpentaria (type); Winton District. Four specimens (♂♀) were given to me by Mr. C. French. Type in Coll. Sloane.

Allied to *Ph. nuytsi* Cast., from which it differs by form more robust and convex; prothorax longer proportionately to its breadth, more strongly narrowed to base (which is evidently narrower than apex); elytra more convex, more declivous to sides and apex, more strongly striate, humeral angles less sharply marked; mandibles with outer side evenly arcuate, right mandible especially with the anterior, external bend far less marked; anterior tibiae wide at apex, but not with external apical angle produced into a long spur-like process, outer edge not with several well marked denticles above apex.

#### PHORTICOSOMUS GULARIS, n.sp.

♂. Subparallel, rather depressed. Head large, left mandible elongate, and strongly hooked at apex; labrum deeply triangularly excised; *submentum bicornute*; prothorax transverse, anterior angles prominent, basal angles rectangular; elytra strongly striate, humeral angles marked; prosternum setigeropunctate before coxæ; ventral segments 3-5 punctate along anterior and posterior margins. Piceous-brown.

Head large (4.5 mm. across eyes), convex and minutely punctate posteriorly; front depressed, a wide irregular fovea on each side; a carinate ridge above each eye; a transverse impression on each side behind eyes; depressed frontal part well defined by a rounded, oblique ridge, extending from inner side of postocular impressions to outer angle of clypeus. Horns of submentum separated, but united at bases to fill all the space between pos-

terior extremities of buccal fissures, pointed obliquely backwards and outwards, obtuse, a setigerous puncture at apex, and one or two long setæ on outer side. Prothorax broader than long (3.3 × 6 mm.), widest before middle, wider across base (4.8 mm.) than apex (4.5 mm.); sides lightly rounded anteriorly, sinuate before base; anterior angles obtuse, prominent; basal angles rectangular; lateral margins wide, widely explanate towards base. Elytra broader than prothorax (10.5 × 6.8 mm.), subparallel on sides, truncate at base; interstices depressed; border slightly raised, and angulate at shoulders. Legs light; anterior tibia wide at apex; external angle dentate, not prominent. Length (with mandibles), 18.5; breadth, 6.8 mm.

♀. Differs from ♂ by head smaller; front less depressed; elevation bounding this depression on the sides short, less defined, less oblique; postocular impressions of head hardly marked; submentum unarmed (lower edge widely emarginate in middle, and with a slight prominence near each side). Length, 15.5; breadth, 6.2 mm.

*Hab.*—W.A.: Cue (H. W. Brown); Strelley River (H. M. Giles)—N.T.: Barrow Creek (from Mr. French).

This species is at once separable from all others by its deeply cleft labrum, the enlargement of the left mandible, and the strange processes of the submentum in ♂. It is noticeable, under a lens of high power, that there are some minute punctures on the outer side of the mandibles, near the ante-apical bend. A similar development of processes on the submentum is met with in the Asiatic harpalide genus *Diocetes*, in which the outer side of the mandibles is plentifully beset with setigerous punctures. The description is founded on specimens from Cue (given to me by Mr. Brown). A specimen (♂) from the Strelley River (given to me by Mr. Giles) has the processes of the submentum greatly reduced in size (forming pyramidal tubercles), showing that this character (as is usual with secondary sexual characters) is variable. Two female specimens examined (from Cue and Barrow Creek) have a puncture on the third interstice of elytra above the apical declivity; in one male specimen alone is this puncture present, and then only on one side.

## PHORTICOSOMUS MACLEAYI, n.sp.

Robust, oval. Prothorax transverse, sides sinuate posteriorly, basal angles rectangular; elytra strongly striate, humeral angles rounded, interstices lightly convex, third interstice unipunctate above apical declivity; anterior tibiæ with outer edge even, apical angle not armed. Anterior tarsi in ♂ with joints 2-4 widely dilatate, spongiose beneath; intermediate tarsi with joints 2-4 lightly dilatate, spongiose beneath. Piceous; legs and under-surface piceous-red.

Prothorax rather depressed, broader than long (2.5 × 3.7 mm.), widest a little before middle, wider across base (3 mm.) than apex (2.65 mm.); sides rounded, roundly narrowed to apex, sinuate posteriorly, and meeting base at right angles; apex emarginate; base truncate; median line lightly impressed. Elytra truncate-oval (6.5 × 4.6 mm.); apical sinuosity lightly developed; apex of each elytron rather pointed. Metasternum punctate on each side. Posterior femora with a row of piliferous punctures along posterior side; posterior trochanters reniform; fourth joint of anterior tarsi transverse, emarginate; of intermediate tarsi turbinate, lightly emarginate; posterior tarsi narrow, first joint not as long as the two succeeding joints together; fourth joint small, simple. Length, 10.5; breadth, 4.6 mm.

*Hab.*—Q.: Cooktown (Olive), Chillagoe (Dodd)—W.A.: King's Sound and Roebuck Bay (*vide* French).

I believe this to be the species which Macleay took to be *Ph. nuytsi* Cast.; at least, I have specimens, received from Mr. C. French, which I have compared with the *Ph. nuytsi* of the Macleay Coll., and found to be similar; but I cannot differentiate these from specimens sent to me by Mr. Olive from Cooktown. It has seemed better to found the species on the Cooktown specimens, which are in better order, and from an exact locality. *Ph. nuytsi* Cast., is another species; it is larger, with the basal border of the elytra raised at the humeral angles, which are decidedly marked.

## Tribe Lebiini.

## XANTHOPHŒA FASCIATA, n.sp.

Elongate. Head oblique behind eyes; prothorax with sides sinuate, basal angles acute; elytra depressed, lightly striate, third



interstice unipunctate about posterior fourth. Testaceous; elytra with a black fascia across middle, this fascia diamond-shaped on inner interstices, narrow externally from third interstice, uniting with a black marginal vitta, this interrupted at posterior fourth; border testaceous on sides.

Prothorax depressed, as wide as head, a little broader than long ( $1.4 \times 1.6$  mm.), wider across base than apex, widely margined laterally; sides lightly rounded on anterior three-fourths, sinuate posteriorly; base cut sharply and squarely on each side; position of anterior marginal seta at widest part indicated by a minute prominence; median line deep. Elytra much wider than prothorax; striæ shallow, finely crenulate; interstices depressed, very minutely shagreened. Length, 9 mm.

*Hab.*—Q.: Cairns District. Two specimens, collected by Mr. A. M. Lea, ticketed "Malandra, beaten from foliage."

A very distinct species, differing from all other described species by the pattern of the elytra.

#### Genus NOTOTARUS.

The species of this genus are found in dry forest-lands under fallen boughs and débris. In January, I found *N. australis* Chaud., in the Park at Perth; and *N. chaudiéri* Sl., and *N. interstitialis* Sl., var. *picea*, at Cunderdin and Kellerberrin, on the railway from Perth to Southern Cross.

#### NOTOTARUS INTERSTITIALIS Sloane.

Var. *PICEA*, n.var. Elytra with interstices punctate as in *N. interstitialis*, but differing by head and prothorax narrower; head more convex, more finely punctate, eyes less convex; prothorax smaller, less strongly narrowed to base, sides less strongly sinuate just before posterior angles, these less prominent, juxtabasal sinuosity (behind posterior angles) shorter, and more decidedly marked. Length, 4.8; head, 1 across eyes; prothorax,  $0.9 \times 1.05$ ; elytra,  $2.6 \times 2$  mm.

*Hab.*—W.A.: Cunderdin and Kellerberrin (Sloane; January).

#### NOTOTARUS MOROSUS, n.sp.

Oval, depressed. Head wide ( $1.15$  mm. across eyes), subdepressed, minutely punctate; eyes prominent; prothorax wide,

hardly narrower at base than apex, punctate, base widely lobate; elytra punctate-striate, interstices lightly convex. Piceous-black; legs testaceous; antennæ, mandibles, and mouth-parts reddish, (antennæ, after second joint, a little darker).

Head finely punctate, not rugulose in middle, lightly longitudinally rugulose on each side near eyes; front depressed; eyes convex, prominent, strongly enclosed behind; postocular part of orbits protuberant, about one-half size of eyes. Prothorax decidedly wider than head ( $1.2 \times 1.5$  mm.), subnitid on disc, finely punctate, widely rugulose-punctate towards margin; sides lightly rounded, very little narrowed (not sinuate) to posterior angles, these small, dentate; basal curve rather short, sinuate on each side; lobe rounded; median line strongly impressed. Elytra truncate-oval ( $3 \times 2.3$  mm.); base emarginate; humeral angles rounded; striæ narrow, deeply impressed, distinctly punctate; interstices lightly convex, finely shagreened, third with a puncture at basal third; striole at base of first interstice well developed, punctate. Length, 5; breadth, 2.3 mm.

*Hab.*—N.T.: Port Darwin (Dodd). Unique in Coll. Sloane.

A distinct species, differing from the other, small, described species by head wider, less punctate; prothorax less narrowed to posterior angles, these less prominent. *Cymindis crassiceps* Macl., is a species of *Nototarus*, but is much larger.

#### NOTOTARUS ANGUSTICOLLIS, n.sp.

Depressed. Head long, convex; prothorax narrow; elytra wide, truncate-oval, striate, interstices punctate. Black; legs and undersurface piceous; mouth-parts, tarsi, and trochanters reddish.

Head narrow (1.7 mm. across eyes), convex; vertex punctate; sides lightly swollen behind eyes; postocular prominences about two-thirds length of eyes, less prominent than eyes; two supra-orbital punctures on each side, posterior considerably behind eyes; eyes distant from prothorax, small, round, convex. Mentum edentate. Labial palps securiform. Base of maxillæ prominent. Prothorax narrow ( $1.7 \times 1.8$  mm.), wider at apex (1.7 mm.) than base (1.4 mm.), broadest a little before middle, narrowly de-

pressed along sides; upper surface punctate; anterior angles rounded, not marked; base truncate above peduncle, sinuate on each side. Elytra truncate-oval ( $5 \times 3.7$  mm.), rounded on sides, and on each side of base: external apical angle not marked; apical truncature obliquely sinuate on each side, rounded at apex of three inner striæ, triangularly excised at suture; striæ strongly impressed, interstices lightly convex, strongly punctate; third with three dorsal punctures, and one at apex; eighth interstice wider than seventh and ninth, closely punctate (the punctures in about four irregular rows); ninth interstice narrow, finely punctate, with a row of widely placed larger punctures; marginal channel punctate; inflexed margin punctate. Prosternum punctate; metepisterna quadrate, punctate. Anterior tarsi in ♂ narrow; three basal joints biserially squamulose in middle of under side. Apical ventral segment unisetose on each side of apex. Length, 9-10; breadth, 3.5-3.7 mm.

*Hab.*—W.A.: Cue (H. W. Brown). Type in Coll. Sloane.

A very distinct species, differing from the others known to me by its large size; long, narrow head and prothorax; wide, oval elytra, with strongly punctate interstices. It is evidently an apterous species, with the elytra soldered together; in comparison with *N. chaudiiri* Sl., the lateral palps are much less widely securiform.

### Physoderides.\*

#### LACHNODERMA FOVEOLATUM, n.sp.

Oval; elytra rugose-foveolate. Head, prothorax, and under-surface red; elytra blue-black; legs and antennæ, after third joint, black.

Head convex, setiferous between eyes; clypeus with a setiferous fovea on each side near anterior angle, a few setiferous punctures on each side behind these clypeal foveæ; eyes prominent; labrum bifoveate, setose in foveæ. Antennæ, after third joint, pubescent; three basal joints sparsely setiferous (about three long setæ on

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\* *Lachnoderma* has been referred to a group, *Physoderides*, by Bates, when referring Asiatic species to the genus. I do not know the true position or value of this group.

basal joint). Prothorax subcordate, widest before middle, strongly sinuate-angustate to base; anterior angles not marked; sides rounded at widest part; posterior angles sharply marked; base rounded in middle, cut obliquely forward to basal angle on each side; lateral margins explanate; upper surface punctate-setose, sparsely so on middle of disc. Elytra subquadrate, much wider than prothorax; striate; striæ foveolate; surface generally rugose-striolate. Tarsi setose. Length, 8·8; breadth, 3·75 mm.

*Hab.*—Q.: Cairns District (Dodd). Unique, in Coll. Sloane.

I received a single specimen from Mr. F. P. Dodd, taken by him in the Cairns District. It differs from *L. cinctum* Macl., by colour prothorax red, not brownish with lateral margins bluish; elytra wholly of a black-blue colour—; head, prothorax, and elytra less hairy; head stouter, with more prominent, hemispherical eyes. The shape of the prothorax, and the sculpture of the elytra are similar in both species.

